

AMENDMENTS TO THE SPECIFICATION

Please replace Paragraph [0004] with the following paragraph rewritten in amendment format:

[0004] ~~On~~ One critical characteristic of four-wheel drive vehicles is the weight of the transfer case. Specifically, the shafts used in transfer cases are generally manufactured from solid forgings which are machined to form various gear segments, bearing and stop surfaces, as well as other features along the length of the shaft. Furthermore, traditional transfer cases include a multi-piece cast housing which includes at least two housing sections that are bolted together for enclosing and supporting the internal components. Because the housing sections are bolted together, each section requires a peripheral flange through which the bolts extend. In view of the recognized needs to reduce vehicle weight for improved fuel economy and to improve vehicle NVH characteristics, it is desirable to develop a light-weight transfer case providing improved NVH characteristics.

Please replace Paragraph [0005] with the following paragraph rewritten in amendment format:

[0005] The present invention is directed to a transfer case for use in a four-wheel drive vehicle having improved weight and NVH characteristics. These improvements are provided by a transfer case having tubular shafts and a one-piece housing enclosed with end plates. To this end the transfer case of the present invention includes a one-piece housing defining first and second apertures and an opening, a first cover plate enclosing the first aperture of the housing and defining an opening, and a second cover plate enclosing the second aperture of said housing and defining an opening. The transfer case

also includes an input shaft extending through and rotatably supported in the opening in the first cover plate, a first output shaft driven by the input shaft and extending through and rotatably supported in the opening in the housing, a second output shaft extending through and rotatably supported in the opening in said second cover plate, and a mode clutch for transferring drive torque from the first output shaft to the second output shaft.

Please replace Paragraph [0014] with the following paragraph rewritten in amendment format:

[0014] With reference now to FIGS. 1 and 2 rear prop shaft 38 is adapted to be connected to a rear output shaft 40 of light-weight transfer case ~~20~~ 20 via a suitable rear coupling 42. Similarly, front prop shaft 36 is adapted to be connected to a front output shaft 44 via a suitable front coupling 46. A transmission output shaft (not shown) couples transmission 18 to an input shaft 48 of light-weight transfer case 20 for supplying power thereto. Transfer case 20 is shown to include a one-piece housing 50. Housing 50 is preferably cast from aluminum or magnesium utilizing a lost ~~foam~~ form casting process. Housing 50 includes a first aperture 52 and a second aperture 54, each sized to permit assembly of various components into an internal chamber 56. As described hereinbelow, input shaft 48 and rear output shaft 40 rotatably support various components within chamber 56 and are themselves rotatably supported at one end by housing 50 and at an opposite end by a first cover plate 58 which encloses first aperture 52 of housing 50.

Please replace Paragraph [0022] with the following paragraph rewritten in amendment format:

[0022] With continued reference to FIG. 2, a mode clutch 200 is provided to selectively shift light-weight transfer case 20 between a two-wheel drive mode and a four-wheel drive mode. Mode clutch 200 includes a hub member 202 that is splined to rear output shaft 40 and an axially moveable mode sleeve 204 shown in a central disengaged or two-wheel drive mode (2WD) position. Mode sleeve 204 is formed with internal spline teeth 206 which are in constant axial sliding engagement with external spline teeth 208 on hub member 202. A mode fork 210 is coupled to mode sleeve 204 for permitting axial movement of mode sleeve 204 via selective actuation of shift mechanism 152. A tubular section 211 of mode fork 210 is secured via pin 212 to rail 172 and is biased by a spring 214 such that a cam follower 216, mounted to mode fork 210, is biased against an outer surface 218 of cam 188. Thus, mode sleeve 204 may be selectively shifted from the two-wheel drive mode (2WD) position shown to a four-wheel drive mode (4WD) position whereat internal spline teeth 206 drivingly engage external spline teeth 220 formed on a chain carrier 222. Chain carrier 222 is journaled on shaft segment 74 of rear output shaft 40 and also includes a drive sprocket 224. Drive sprocket 224 engages a chain 226, shown in dashed lines, which is coupled to a driven sprocket 228. Driven sprocket 228 is secured to or an integral portion of sprocket segment 98 of front output shaft 44. It should also be noted that front output shaft 42 is formed from tubular material similarly to rear output shaft 40, as discussed above. For example, an expandable mandrel tool may be inserted into a tubular work piece and expanded to form the shaped configuration of

front output shaft 44. As such, front output shaft 44 incorporates the weight and NVH advantages resulting from the tubular forming process.

Please replace Paragraph [0026] with the following paragraph rewritten in amendment format:

[0026] Referring now to FIG. 4, transfer case 20' is shown to now be equipped with a modified rear output shaft, identified by reference numeral 40'. Rear output shaft 40' is a two-piece assembly having a shaft segment 74' and a pilot segment ~~76'~~ 72'. Pilot segment ~~76'~~ 72' is secured (i.e., welded) to a forward end of shaft segment 74'. This arrangement of a two-piece shaft 40' eliminates the need to perform a shaft forming operation. In addition, a modified front output shaft 44' is shown installed in transfer case 20'. As shown, front output shaft 44' has a tubular shaft segment 250 to which drive sprocket 228' is secured (i.e., welded, splined, etc.) for common rotation. Tubular shaft segment 250 has a uniform wall thickness across its length such that bearing assemblies 104 and 106 are supported thereon. Radial plate segment ~~110A'~~ 110a' of second cover plate 110' has be slightly modified to accommodate retention of seal assembly 108 on shaft segment 250.

Please replace Paragraph [0027] with the following paragraph rewritten in amendment format:

[0027] Finally, a cylindrical insert 254 is secured (i.e., welded) in the forward open end of shaft segment 250 and includes internal splines 256 adapted for meshed engagement with an externally-splined component of coupling 46. Obviously, similar

splined inserts can be used in conjunction with rear output shafts 40, 40' as well. An end cap ~~256~~ 258 is shown to enclose the rear end of shaft segment.